Substitute	for form 1449A/PT	o		Complete if Known		
INIEO	DIATION	. DIG	OL COURE	Application Number	10/527,725	
			CLOSURE	Filing Date	September 16, 2002	
STA	LEMENT B	BY A	PPLICANT	First Named Inventor	Robert Shaw	
				Group Art Unit	Unknown	
	(use as many sheets as necessary)			Examiner Name	Unknown	
Sheet	1	of	5 Sheets	Attorney Docket Number	TXTECH-0001 WO US (218601.7)	

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS		
Examiner Initials * Cite No.1		ministration   - 1 and ment (poster) inagazino, journal, contait, contait, catalog, craft, acto, page(c), relative means		
		ALLAWI, H. T. and SantaLucia, J. Jr. (1997), "Thermodynamics and NMR of Internal G-T Mismatches in DNA", <i>Biochemistry</i> 36, 10581-10594.		
	2.	AMBLER, R. P., Daniel, M., Fleming, J., Hermoso, JM., Pang, C. and Waley, S. G. (1985), "The Amino Acid Sequence of the Zinc-Requiring \(\mathcal{B}\)-Lactamase II from the bacterium \(Bacillus \) cereus", \(FEBS \) Lett. 189, 207-211.		
	3.	BARTEL, D. P. and Szostak, J. W., (1993), "Isolation New Ribozymes from a Large Pool of Random Sequences", Science 261, 1411-1418.		
	4.	BICKNELL, R., Schaeffer, A., Waley, S. G. and Auld, D. S. (1986), "Changes in the Coordination Geometry of the Active-Site Metal During Catalysis of Benzylpenicillin Hydrolysis by <i>Bacillus cereus</i> B-Lactamase II", <i>Biochemistry</i> 25, 7208-7215.		
	5.	BOCK, L. C., Griffin, L. C., Latham, J. A., Vermass, E. H. and Toole, J. J. (1992), "Selection of Single-Stranded DNA Molecules that bind and Inhibit Human Thrombin", <i>Nature</i> 355, 564-566.		
	6.	CHEN, H. and Gold, L., (1994), "Selection of High-Affinity RNA Ligands to Reverse Transcriptase", <i>Biochemistry</i> 33, 8746-8756.		
	7.	CONCHA, N. O., Janson, C. A., Rowling, P., Pearson, S., Cheever, C. A., Clarke, B. P., Lewis, C., Galleni, M., Frere, J. M., Payne, D. J., Bateson, J. H. and Abdel-Meguid, S. S. (2000), "Crystal of the IMP-1 Metallo-\(\textit{B-Lactamase}\) from Pseudomonas aeruginosa and its Complex with a Mercaptocarboxylate Inhibitor", \(\textit{Biochemistry}\) 15, 4288-4298.		
	8.	CROMPTON, B., Jago, M., Crawford, K., Newton, G. G. F. and Abraham, E. P. (1962), "Behaviour of Some Derivatives of 7-Aminocephalosporanic Acid as		
$\forall$	9.	DAVIES, R. B. and Abraham, E. P. (1974), "Metal Cofactor Requirements of B- Lactamase II", <i>Biochem. J.</i> 143, 129-135.		

Examiner Signature	/Young J. Kim/	Date Considered	01/23/2008
-----------------------	----------------	--------------------	------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313.

Substitute for form 1449A/PTO					Complete if Known
MICO	384 A TIC	ii nia	01 00UDE	Application Number	10/527,725
			CLOSURE	Filing Date	September 16, 2002
STATEMENT BY APPLICANT				First Named Inventor	Robert Shaw
				Group Art Unit	Unknown
(use as many sheets as necessary)			necessary)	Examiner Name	Unknown
Sheet	2	of	5 Sheets	Attorney Docket Number	TXTECH-0001 WO US (218601.7)

OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS						
Examiner Initials *			T²			
/YK/		DAVIES, R. B. Abraham, E. P. and Melling, J. (1974), "Separation, Purification and Properties of \( \mathcal{B}\)-Lactamase I and \( \mathcal{B}\)-Lactamase II from \( \mathcal{B}\) acillus cereus 569/H/9", \( \mathcal{B}\) iochem. \( J. 143, 115-127. \)				
	11	DAVIES, R. B. Abraham, E. P. Melling, J. and Pollock, M. R. (1975), "Comparison of ß-lactamase II from <i>Bacillus cereus</i> 569/H/9 with a ß-Lactamase from <i>Bacillus cereus</i> 5/B/6", <i>Biochem. J.</i> 145, 409-411.				
	12	FARMULOK, M. and Szostak, J. W. (1992), "In Vitro Selection of Specific Ligand Binding Nucleic Acids", Angew. Chem. Int. Ed. Engl. 31, 979-988.				
·	13	FELICI, A. and Amicosante, G. (1995), "Kinetic Analysis of Extension of Substrate Specificity with Xanthomonas maltophilia, Aeromonas hydrophylia and Bacillus cereus Metallo-\( \text{B}\)-Lactamases", Antimicrob. Agents Chemother. 39, 192-199.				
	14	FELICI, A., Amicosante, G., Oratore, A., Strom, R., Ledent, P., Joris, B., Fanuel, L. and Frere, JM. (1993), "An Overview of the Kinetic Parameters of Class B β-Lactamases", Biochem. J. 291, 151-155.				
	15	FELICI, A., Perilli, M., Franceschini, N., Rossolini, G. M., Galleni, M., Frere, JM., Oratore, A. and Amicosante, G. (1997), "Sensitivity of Aeromonas hydrophilia Carbapenemase to Δ <sup>3</sup> -Cephems", Antimicrob. Agents Chemother. 41, 866-868.				
		HICKE, B. J. and Stephens, A. W. (2000), "Escort Aptamers", J. Clin. Invest. 106, 923-928.				
V	17	HILLIARD, N. P., (1995), Structure-Function Relationships in the Metallo-\( \mathbb{G}\)- Lactamase of Bacillus cereus 5/B/6", Ph.D. thesis, Texas Tech University				

Examiner /Young J. Kim/ Date Con-		01/23/2008
Signature / Tourig J. Killi/ Con	nsidered	01/23/2000

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313.

<sup>1</sup> Unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

Substitute	for form 1449/	VPTO		Complete if Known		
	DA4 A TI		01 001105	Application Number	10/527,725	
			CLOSURE	Filing Date	September 16, 2002	
STATEMENT BY APPLICANT				First Named Inventor	Robert Shaw	
		•		Group Art Unit	Unknown	
	(use as many sheets as necessary)			Examiner Name	Unknown	
Sheet	3	of	5 Sheets	Attorney Docket Number	TXTECH-0001 WO US (218601.7)	

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Initials No. 1 number(s), publisher, city and/or country where published.  HUSSAIN, M., Pastor, F. I. J. and Lampen, J. O. (1987), "Cloning and Sequencing of the blaZ Gene Encoding 6-Lactamase III, a Lipoprotein of Bacillus cereus 569/H", J.  18 Bacteriol. 169, 579-586.		T²
/ΥK/			
		JAEGER, J. A., Turner, D. H. and Zuker, M. (1989), "Improved Predictions of Secondary Structures for RNA", <i>Proc. Natl. Acad. Sci. USA</i> 86, 7706-7710.	
	20	JAEGER, J. A., Turner, D. H. and Zuker, M. (1990), "Predicting Optimal and Suboptimal Secondary Structure for RNA", <i>In Methods in Enzymology</i> 183, 281-306.	
	21	JELLINEK, D., Green, L. S., Bell, C. and Janjic, N. (1994), "Inhibition of Receptor Binding by High-Affinity RNA Ligands to Vascular Endothelial Growth Factor", Biochemistry 33, 10450-10456.	
	1	KOGUT, M., Pollock, M. R. and Tridgell, E. J. (1956), "Purification of Penicillin-Induced Penicillinase of <i>Bacillus cereus</i> NRRL 569", <i>Biochem. J.</i> 62, 391-401.	
	23	KUWABARA, S., Adams, E. P. and Abraham, E. P. (1970), "Composition of ß-lactamase I and ß-Lactamase II from <i>Bacillus cereus</i> 569/H", <i>Biochem. J.</i> 118, 475-480.	
	24	KUWABARA, S. and Lloyd, P. H. (1971), "Protein and Carbohydrate Moieties of a Preparation of \( \mathcal{B}\)-Lactamase II", \( Biochem. J. 124, 215-220. \)	
	25	LEDENT, P., Raquet, X., Joris, B., Van Beeumen, J. and Frere, JM. (1993), "A Comparative Study of Class D Beta-Lactamases", Biochem. J. 292, 555-562.	
	26	LIM, H. M., Pene, J. J. and Shaw, R. W. (1988), "Cloning, Nucleotide Sequence and Expression of the <i>Bacillus cereus</i> 5/B/6 \( \beta\)-Lactamase II Structural Gene" J. <i>Bacteriol</i> . 170, 2873-2878.	
$\sqrt{}$		MACAYA, R. F., Waldron, J. A., Beutel, B. A., Gao, H., Joeston, M. E., Yang, M., Patel, R., Bertelsen, A. H. and Cook, A. G. (1995), "Structural and Functional Characterization of Potent Antithrombotic Oligonucleotides Possessing Both Quadruplex and Duplex Motifs", Biochemistry 34, 4478-4492.	

		<del></del>	
Examiner Signature	/Young J. Kim/	Date Considered	01/23/2008

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313.

<sup>1</sup> Unique citation designation number (optional). 2 Applicant is to place a check mark here if English tanguage Translation is attached.

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of Information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

Complete If Known

Application Number 10/527,725

Filing Date September 16, 2002

First Named Inventor Robert Shaw

Group Art Unit Unknown

(use as many sheets as necessary) Examiner Name

Sheet 4 of 5 Sheets Attorney Docket N

Examiner Name Unknown
Attorney Docket Number TXTECH-0001 WO US (218601.7)

			OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	
Examiner Initials * Cite No.1			Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		28	MATAGNE, A., Ledent, P., Monnaie, D., Felici, A., Jamin, M., Raquet, X., Galleni, M., Klein, D., Francois, I. and Frere, J. M. (1995), "Kinetic Study of Interaction Between BRL 42715, \( \mathbb{B}\)-Lactamases and D-Alanyl-D-Alanyl Peptidases", Antimicrob. Agents Chemother 39, 227-231.	
		29	NEU, H. C. (1992), "The Crisis in Antibiotic Resistance", Science 257, 1064-1073.	
			PAYNE, D. J. (1993), "Metallo-β-lactamases-A New Therapeutic Challenge", J. Med. Microbiol. 39, 993-999.	
		31	RASMUSSEN, B. A., Yang, Y., Jacobs, N. and Bush, K. (1994), "Contribution of Enzymatic Properties, Cell Permeability and Enzyme Expression to Microbial Activities of Beta-lactams in Three Bacteroides fragilis Isolates that Harbor a Metallo-B-Lactamase gene", Antimicrob. Agents Chemother. 38, 2116-2120.	
		32	ROBERTSON, D. L. and Joyce, G. F. (1990), "Selection in vitro of an RNA Enzyme	
	-	33	RUCKMAN, J., Green, L. S., Beeson, J., Waugh, S., Gillette, W. L., Henninger, D. D., Claesson-Welsh, L. and Janjie, N. (1998), "2'-Fluoropyrimidine RNA-Based Aptamers to the 165-Amino Acid Form of Vascular Endothelial Growth Factor (VEGF <sub>165</sub> ), Journal of Biological Chemistry 273, 20556-20567.	
,		34	SABATH, L. D. and Abarham, E. P. (1966), "Zinc as a Cofactor for Cephalosporinase	
\	/	35	SUTTON, B. J., Artymiuk, P. J., Cordero-Borboa, A. E., Little, C., Philips, D. C. and Waley, S. G. (1987), "X-Ray Crystallographic Study of \( \beta\)-Lactamase II from Bacillus cereus at 0.35 nm Resolution", \( \beta\)-iochem. J. 248, 181-188.	

Examiner Signature	/Young J. Kim/	Date Considered	01/23/2008

EXAMINER: initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English tanguage Translation is attached.

Substitute	for form 1449A/PTC	<b>o</b>		Complete if Known		
	D14471011	010		Application Number	10/527,725	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Filing Date	September 16, 2002	
				First Named Inventor	Robert Shaw	
				Group Art Unit	Unknown	
	(use as many sheets as necessary)			Examiner Name	Unknown	
Sheet	5	of	5 Sheets	Attorney Docket Number	TXTECH-0001 WO US (218601.7)	

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	
Examiner	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
/YK/	36	TASSET, D. M., Kubik, M. F. and Steiner, W. (1997), "Oligonucleotide Inhibitors of Human Thrombin that Bind Distinct Epitopes", J. Mol. Biol. 272, 688-698.	
		THATCHER, D. R. (1975), "Partial Amino Acid Sequence of the Extracellular B- Lactamase I of Bacillus cereus 569/H", Biochem. J. 147, 313-326.	
	38	TSIANG, M., Gibbs, C. S., Griffin, L. C., Dunn, K. E. and Leung, L. K. (1995), "Selection of a Suppressor mutation That Restores Affinity of an Oligonucleotide Inhibitor for Thrombin Using in Vitro Genetics", J. Biol. Chem. 270, 19370-19376.	
		TUERK, C. and Gold, L. (1990), "Systematic Evolution of Ligands by Exponential Enrichment", <i>Science</i> 249, 505-510.	
	40	TURNER, D. H., Sugimoto, N. and Freier, S. M. (1988), "RNA Structure Prediction", Annu. Rev. Biophys. Biophys. Chem. 17, 167-192.	
	41	ZUBER, M., Patterson, T. A. and Court, D. L. (1987), "Analysis of nut", Proc. Natl. Acad. Sci. USA 84, 4514-4518.	
	42	ZUKER, M. (1989), "On Finding All Suboptimal Foldings of an RNA Molecule" Science 244, 48-52.	
	43	PITOUT JD, Sanders CC, Sanders WE Jr. Antimicrobial Resistance with Focus on Beta-lactam Resistance in Gram-Negative Bacilli. Am J Med. 1997 Jul; 103(1):51-9.	

Examiner Signature	/Young J. Kim/	Date Considered	01/23/2008

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Complete if Known Substitute for form 1449A/PTO 10/527,725 INFORMATION DISCLOSURE **Application Number** September 16, 2002 Filing Date STATEMENT BY APPLICANT Robert Shaw First Named Inventor unknown **Group Art Unit** (use as many sheets as necessary) unknown **Examiner Name** TXTECH-0001 WO US (218601.7) Attorney Docket Number 6 Sheets Sheet

			U.S. PATENT	DOCUMENTS	
Examiner	Cite	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant
Initials *	No.'	Number - Kind Code <sup>2</sup> (if known)	MM-DD-YYYY		Figures Appear
TYKI	1	US - 5,637,459	06/10/1997	Burke, et al.,	Entire Patent
	2.		01/06/1998	Rasmussen, et al.,	Entire Patent
<del>\ \</del>	3.		06/30/1998	Burke, et al.,	Entire Patent
-₩-	4.	*** * ******************	07/18/2002	Jacobs et al.,	Entire Patent
	7.	oopp			
	<del></del>				
	-				
	<del> </del>				
	<del>                                     </del>				
	1		-		L
	-	<del>                                     </del>			

7		FOREIGN PA	TENT DOCU	MENTS		
	0.1-	Foreign Patent Document	Publication	Name of Patentee or	Pages, Columns, Lines, Where Relevant	
Examiner Initiats*	Cite No.1	Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)	Date MM-DD-YYYY	Applicant of Cited Document	Passages or Relevant Figures Appear	T <sup>6</sup>
<del></del>			<del> </del>			

			· · · · · · · · · · · · · · · · · · ·
Examiner Signature	/Young J. Kim/	Date Considered	01/23/2008

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313.

Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. <sup>1</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 6 Applicant is to place a check mark here if English language Translation is

Complete if Known Substitute for form 1449A/PTO **Application Number** 10/527,725 INFORMATION DISCLOSURE September 16, 2002 Filing Date STATEMENT BY APPLICANT First Named Inventor Robert Shaw Unknown **Group Art Unit** Unknown (use as many sheets as necessary) **Examiner Name** TXTECH-0001 WO US (218601.7) Attorney Docket Number 6 Sheets Sheet

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	
Examiner	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
iriidais		APPAHAM F. P. and Waley S. G. (1979) "B-Lactamases from Bacillus	
/YK/		cereus", in Beta-Lactamases (Hamilton-Miller, J. M. I. and Smith, J. 1., eds.)	
/ I I V	5.	nn 311-338 Academic Press, New York.	
	i	AT REPTS II Katalin N and Wodak, S. J. (1998), "Analysis of Linc	
- 1	6.	Dinding Sites in Protein Crystal Structures", Protein Science 7, 1700-1710.	
	<u> </u>	AMBLER, R. P. (1980), "The Structure of \(\mathcal{B}\)-Lactamases", Phil. Trans. R. Soc.	
ŀ	7.	Land 1290 321-331	
_	<del>                                     </del>	AMBLER R P. Coulson, A. F. W., Frere, JM., Ghuysen, JM., Joris, B.,	
		Foremen M. Levesque R. C. Triahy, G. and Waley, S. G. "A Standard	
	1	Numbering Scheme for the Class A B-Lactamases", (1991) Biochem. J. 276,	ļ
	8	260.270	
_	<del>                                     </del>	PAKER DW Rothberg PG An Unexpected Product From Polymerase Chain	
		Reaction-Mediated Site-Directed Mutagenesis Due to Misalignment of the	
	9	Mismatched Primer Mol Diagn 1998 Sep;3(3):157-101.	
	<b>─</b> ─	ROLINAGIL S. Laws, A., Galleni, M. and Page, M. (1998), "The mechanism	1
	1	of Catalysis and the Inhibition of the Bacillus cereus Zinc-Dependent B-	1
	1	d lactamase" Biochem J. 331, 703-711.	ļ
	<del> </del>	BRENNER D. G. and Knowles, J. D., (1984), "Penicillanic Acid Suitone:	
	1	Nature of Irreversible Inactivation of RTEM B-Lactamase from Escherichia	1
1	1 1		<del> </del>
		BROWN, TA. DNA Polymerase I, Klenow Fragment. in Molecular Biology	
	1	d Labfax 2 <sup>nd</sup> ed 1 147-148 (1998).	<del> </del>
	<u> </u>	BRUNO IC Kiel II In vitro selection of DNA aptamers to anthrax spores	
		with electrochemiluminescence detection. Biosens Bioelectron. 1999 May	
	1	21.14(5):457.64	┼
_	1	RIVNAK ID Chen H. Vogeti L. Gadhachanda VR, Buchanan CA, Paizkill I,	
-		Show DW Spencer I Walsh TR Penicillin-derived inhibitors that	Ì
	1	simultaneously target both metallo- and serine-beta-lactamases. Bloorg Wed	1
V	1 .	4 Chem Lett. 2004 Mar 8;14(5):1299-304.	

1	Examiner	/Young J. Kim/	Date Considered	01/23/2008
	Signature	/ roung J. Kim/	Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Complete if Known Substitute for form 1449A/PTO 10/527,725 **Application Number** INFORMATION DISCLOSURE September 16, 2002 Filing Date STATEMENT BY APPLICANT Robert Shaw First Named Inventor Group Art Unit Unknown Unknown (use as many sheets as necessary) **Examiner Name** TXTECH-0001 WO US (218601.7) Attorney Docket Number of 6 Sheets Sheet

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	
Examiner	Cite No.1	include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T 2
/YK/		CARFI, A., Pares, S., Duee, E., Galleni, M., Duez, C., Frere, J. M. and Dideberg, O. (1995), "The 3-D Structure of a Zinc Metallo-\(\beta\)-lactamase from <i>Bacillus cereus</i> Reveals a New Type of Protein Fold", <i>The EMBO Journal</i> 14, No. 20, 4914-4921.	
		CONCHA, N. O., Rasmussen, B. A., Bush, K. and Herzberg, O. (1996), "Crystal Structure of the Wide-Spectrum Binuclear Zinc \(\beta\)- Lactamase from Bacteriodes fragilis", Structure 4, 823-836.	
		DANZIGER, L. H. and Pendland, S. L. (1995), "Bacterial Resistance to B-Lactam Antibiotics", Am. J. health Syst. Pharm. 52 (Suppl 2), S3-8.	
	18	DRAPER DE. Protein-RNA recognition. Annu Rev Biochem. 1995;64:593-620.  ELLINGTON A.D. and Szostak J. W. (1990), "In Vitro Selection of	
	19	RNA Molecules that Bind Specific Ligands", <i>Nature</i> 346, 818-822.  FISHER, L. Charnas, R. L. Bradley, S. M. and Knowles, J. R. (1981),	
	2	"Inactivation of the RTEM B-Lactamase from Escherichia coli,	-
	2	FOLK, J. E. and Schirmer, E. W. (1963), "The Porcine Pancreatic Carboxypeptidase A System", J. Biol. Chem. 238, 3884-3894.	-
	2	FRERE, J. M. (1995) Mol. Microbiol. 16 (3) "B-Lactamases and Bacterial Resistance to Antibiotics", 385-395.	-
		GARCIA-SAEZ I, Hopkins J, Papamicael C, Franceschini N, Amicosante G, Rossolini GM, Galleni M, Frere JM, Dideberg O. The 1.5-A structure of Chryseobacterium meningosepticum zinc betalactamase in complex with the inhibitor, D-captopril. J Biol Chem. 2003	
V	2	Jun 27;278(26):23868-73. Epub 2003 Apr 8.	

Examiner		Date	01/23/2008
	/Young J. Kim/	Considered	01/23/2000
Signature	/ roung o. rain/		

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Complete if Known Substitute for form 1449A/PTO 10/527,725 Application Number INFORMATION DISCLOSURE September 16, 2002 Filing Date STATEMENT BY APPLICANT First Named Inventor Robert Shaw Unknown **Group Art Unit** Unknown (use as many sheets as necessary) **Examiner Name** TXTECH-0001 WO US (218601.7) of 6 Sheets Attorney Docket Number Sheet

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	
Examiner	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
THREATO		GHUYSEN, JM. (1988) "Evolution of DD-Peptidases and B-	
		Lactamases", in Antibiotic Inhibition of Bacterial Cell surface Assembly	•
/YK/		and Function (Actor, P., Daneo-Moore, L., Higgins, M. L., Salton, M. R.	
		J. and Shockman, G. D., Ed.) pp. 268-284, American Society for Micro	
ı	24	hiology Washington D C	
		GOLD, L., Polisky, B., Uhlenbeck, O. and Yarus, M., (1995), Diversity	
	25	of Oligonucleotide Functions", Annu. Rev. Biochem. 64, 763-797	
		HANAHAN, D. (1983), "Studies of Transformation of Escherichia coli	
	26	with Plasmids" .I Mol. Biol. 166, 557-580.	
	· · · · · ·	IORIS, B., Ledent, P., Dideberg, O., Fonze, E., Lamotte-Brasseur, J.,	
	ļ	Kelly, J. A., Ghuysen, JM. and Frere, JM. (1991), "Comparison of	
- I		the Sequences of Class A Beta-Lactamases and of the Secondary	
		Structure Elements of Penicillin-Recognizing Proteins", Antimicrob.	
	27	Agents Chemother. 35, 2294-2301.	<u>.</u>
		JOYCE, G. F. (1989), "Amplification, Mutation and Selection of	]
	2	Catalytic RNA" Gene 82, 83-87.	-
		KELLY, J. A., Knox, J. R., Moews, P. C., Moring, J. and Zhao, H. C.	
	1	(1988) "Molecular Graphics: Studying B-Lactam Inhibition in Three	İ
1		Dimensions", in Antibiotic Inhibition of Bacterial Cell surface Assembly	
	l	and Function (Actor, P., Daneo-Moore, L., Higgins, M. L., Salton, M. R.	
		J. and Shockman, G. D., Ed.) pp. 261-267, American Society for Micro	·
· · ·	2	biology, Washington, D. C.	├
		KLUG SJ, Famulok M. All you wanted to know about SELEX. Mol	
	3	Biol Rep. 1994;20(2):97-107.	$\vdash$
		LIVERMORE, D. M. (1991), "Mechanisms of Resistance to \(\beta\)-Lactam	
	3	Antibiotics", Scand. J. Infect. Dis., Suppl. 78, 7-16	+
I		LOWRY, O. H., Rosebrough, N. J., Farr, A. L. and Randall, R. J. (1951),	
		"Protein Measurement with the Folin Phenol Reagent", J. Biol. Chem.	-
V	3	<b>193</b> , 265-275.	1

•				
Examiner Signature	/Young J. Kim/	Date Considered	01/23/2008	<u>·</u>

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313.

<sup>1</sup> Unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

Complete if Known Substitute for form 1449A/PTO 10/527,725 **Application Number** INFORMATION DISCLOSURE September 16, 2002 Filing Date STATEMENT BY APPLICANT First Named Inventor Robert Shaw Unknown **Group Art Unit** Unknown **Examiner Name** (use as many sheets as necessary) TXTECH-0001 WO US (218601.7) 6 Sheets Attorney Docket Number Sheet

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	
Examiner	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
/YK/		MAUGH, T. M. (1981), "A New Wave of Antibiotics Builds", Science 214, 1225-1228.	
	33	MAXAM, A. M. and Gilbert, W. (1977), "A New Method for	
		Sequencing DNA" Proc. Natl. Acad. Sci. USA 74, 560-564.	
	34	MOLLARD C Moali C Panamicael, C., Damblon, C., Vessiller, S.,	
	1	Amicogante G. Schoffeld C. J. Galleni, M., Frere, J. M. and Roberts,	
		G. C. (2001), "Thiomandelic Acid, a Broad Spectrum Inhibitor of Zinc B-	
	_,	I notomases" I Riol Chem 276 45015-45023.	
$\dashv$	3:	DAVNE D I Rateson I H Gasson, B. C., Proctor, D., Knusni, I,	
		Farmer T H Tolson D. A., Bell, D., Skett, P. W., Marshall, A. C.,	
		Doid D. Ghosez I. Combret Y. and Marchand-Brynaeri, J. (1997),	
		"Inhibition of Metallo-R-I actamases by a Series of Mercapioacetic Actu	
	2	Thiol Ester Derivatives". Antimicrob. Agents Chemother. 41, 133-140.	
	<del> </del>	PITOLIT I D D Sanders, C. C. and Sanders, W. E. (1997),	
ļ		"Antimicrobial Resistance with Focus on \(\mathbb{B}\)-Lactam Resistance in Gram-	
	1 2	Decili " Am I Med 103 51-59.	<u> </u>
		RAHIL, J. and Pratt, R. F. (1991), "Phosphonate Monoester Inhibitors of	
	۱ ،	Class A \(\beta\)-Lactamases", Biochem. J. 275, 193-195.	<u> </u>
	<del>                                     </del>	DEDDY P. Peterkofsky A and McKenney, K. (1989),	
	Ì	"Hymerevpression and Purification of Escherichia coli Adenyiate Cyclase	
		Using a Vector Designed for Expression of Lethal Gene Products,	
	. 3	Musloin Acids Pas 17 10473-10488.	├
	† <u>`</u>	SAMPROOK I Fritsch F. F. and Maniatis, T. (1989), "Electrophoretic	
1		Durification of Oligonucleotides". Molecular Cloning: a laboratory	
		manual, 2ed, pp. 7.70, and 7.76, Cold Spring Harbor Laboratory Press,	
V		New York.	

	•		
Examiner Signature	/Young J. Kim/	Date Considered	01/23/2008

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313.

<sup>1</sup> Unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

Complete if Known Substitute for form 1449A/PTO 10/527,725 Application Number INFORMATION DISCLOSURE September 16, 2002 Filing Date STATEMENT BY APPLICANT Robert Shaw First Named Inventor Unknown **Group Art Unit** Unknown **Examiner Name** (use as many sheets as necessary) TXTECH-0001 WO US (218601.7) Attorney Docket Number 6 Sheets Sheet

OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS					
Examiner	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue	T 2		
/YK/		SCROFANI, S. D., Chung, J., Huntley, J. J., Benkovic, S. J., Wright, P. E. and Dyson, H. J. Biochemistry (1999), "NMR Characterization of the Metallo-B-Lactamase from Bacteroides fragilis and Its Interaction with a Tight-Binding Inhibitor", 44, 14507-14514.			
-		SEEMAN NC, Rosenberg JM, Rich A. Sequence-specific recognition of double helical nucleic acids by proteins. Proc Natl Acad Sci U S A.			
		2 1976 Mar;73(3):804-8.  SHAW, R. W., Clark, S. D., Hilliard, N. P. and Harman, J. G. (1991),  "Hyperexpression in <i>Escherichia coli</i> , Purification and Characterization of the Metallo-β-lactamase of <i>Bacillus cereus</i> 5/B/6", <i>Prot. Exp. Purif.</i>			
		2, 151-157.  VON HIPPEL PH, McGhee JD. DNA-protein interactions. Annu Rev Biochem. 1972;41(10):231-300.			
		YANG, K. W. and Crowder, M. W. (1999), "Inhibition Studies on the Metallo-B-lactamase from Stentrophomonas maltipholia", Arch.			
		International Search Report: United States Patent and Trademark Office March 11, 2005			
	-				
	1				

	Examiner Signature	/Young J. Kim/	Date Considered	01/23/2008
Signature				

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313.